International Uranium (USA) Corporation

Processing USM Ore at the White Mesa Mill

August 1, 2003

Presented to:
State of Utah
Radiation Control Board
Salt Lake City, UT

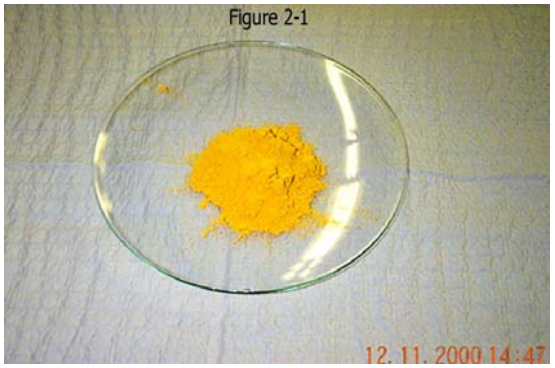
OVERVIEW

- USM Ore Program
  - Blending DOE Surplus LEU, NU & DU to Create USM Ore
  - Processing USM Ore at the White Mesa Mill
- Amendment to White Mesa Mill License Required
  - License Amendment Application
  - White Paper
  - Environmental Report (ER)

DOE EM-OWNED SURPLUS NUCLEAR MATERIALS

- Significant DOE Legacy NU, DU & LEU Inventory
- Mostly Alloyed and Unalloyed Metals and Oxides
- Approximately 4,700 mt U Residing Primarily in Storage at Portsmouth, OH
- Additional Quantities of LEU, NU and DU Throughout the DOE Complex

POTENTIAL USM ORE FEED MATERIALS

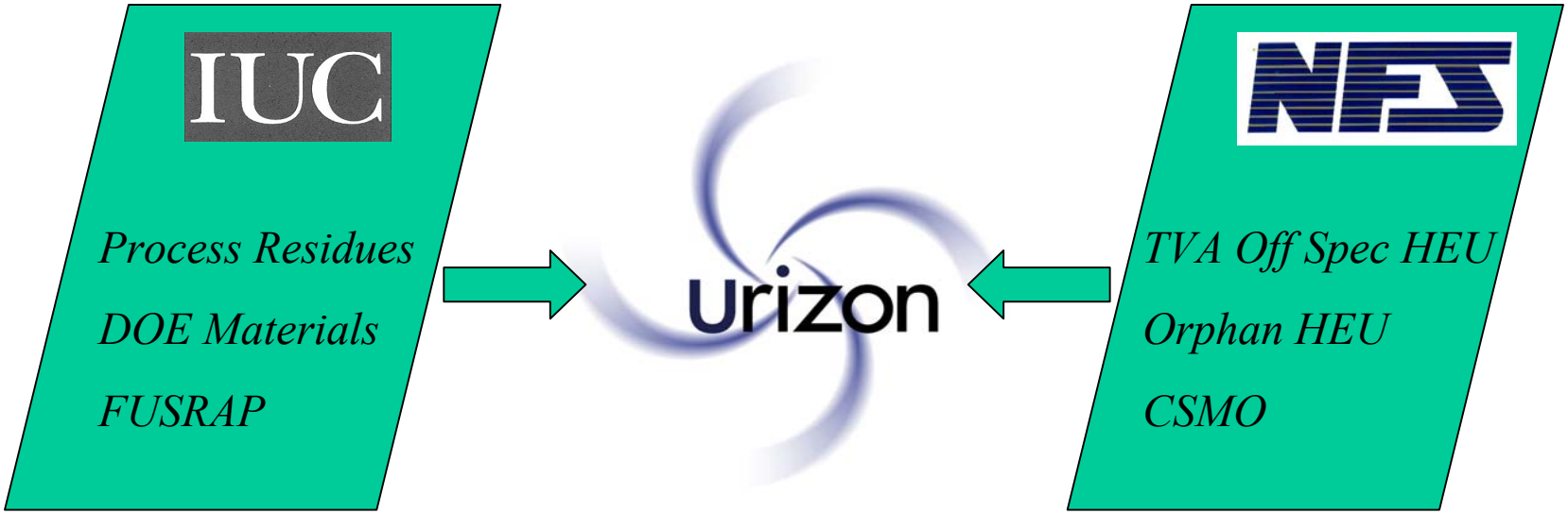


DOE DISPOSITION ALTERNATIVES

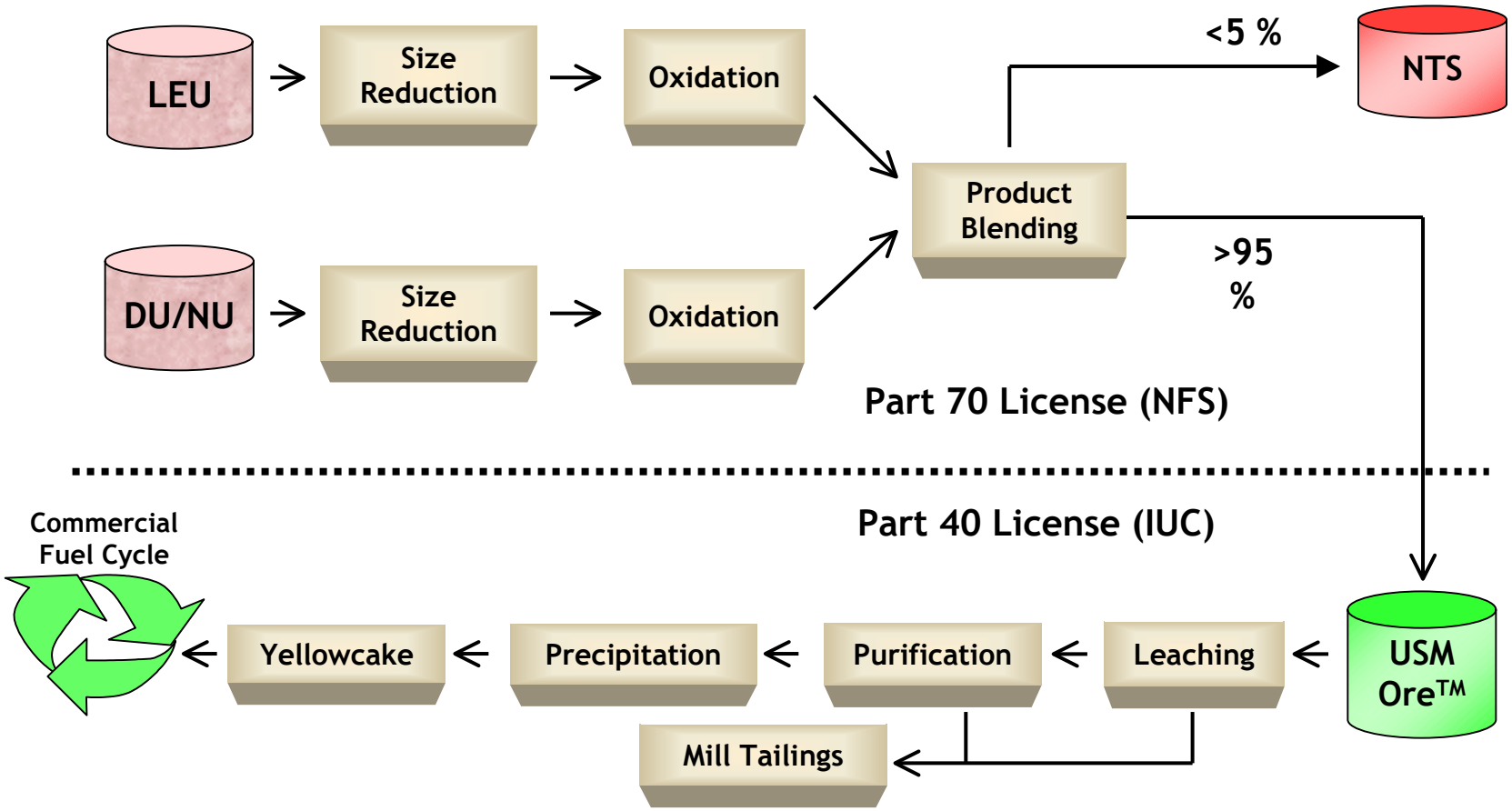
- Do Nothing
  - Significant ongoing cost to manage
- Sale to Market
  - Trace contaminant levels exceed ASTM standards for use as commercial fuel
  - Form does not meet fuel cycle feed requirements
- Transfer for DOE Programmatic Use
  - No currently identified programmatic use
- Reclassify as *Waste* for Disposal
  - Repackaging/handling
  - Treatment required to satisfy acceptance criteria

RECYCLE FOR REUSE

Processing DOE Surplus Uranium-Bearing Materials for Reuse



BLOCK FLOW DIAGRAM



BENEFITS OF USM ORE PROGRAM

- Provides a viable disposition path for surplus DOE materials
- Recovers valuable energy resource through *recycling* for future U.S. nuclear power generation needs
- Stimulates the struggling domestic uranium recovery industry and strengthens the domestic nuclear fuel cycle
- Responsive to DOE Secretary's plan for demonstrating U.S. origin technology to satisfy national security objectives

USM Ore Process Stream Characterization

USM ORE SPECIFICATIONS AT WHITE MESA MILL

- Mill Feed Acceptance Criteria and Tests (***FACTs)*** established for receipt of USM Ore at Mill
- FACTs established to ensure that USM Ore
  - Meets all regulatory requirements
  - No potential environmental impacts
- Mill will verify USM Ore meets FACTs upon receipt, and prior to acceptance for processing

MILL FACTs

- USM Ore must be homogeneous blend throughout each drum
- Each drum of USM Ore must have an isotopic weight percent U-235 of 0.700 to 0.724
- Each shipment of USM Ore must not exceed the specifications for radiological contaminants

YELLOWCAKE PRODUCT

- Two to four million pounds of yellowcake (U_3O_8) produced per year
- Yellowcake virtually indistinguishable from that produced from conventionally mined ores or other alternate feeds

TAILINGS

- Volume of tailings significantly less than from conventional ore processing
- No Ra-226, Th-230, Pb-210 or their daughters, which has an offsetting (net benefit) effect

Regulatory Framework

(White Paper)

REGULATORY FRAMEWORK

- LEU received and downblended at NFS' Part 70 facility in Erwin, TN, under separate Part 70 licensing action at NFS

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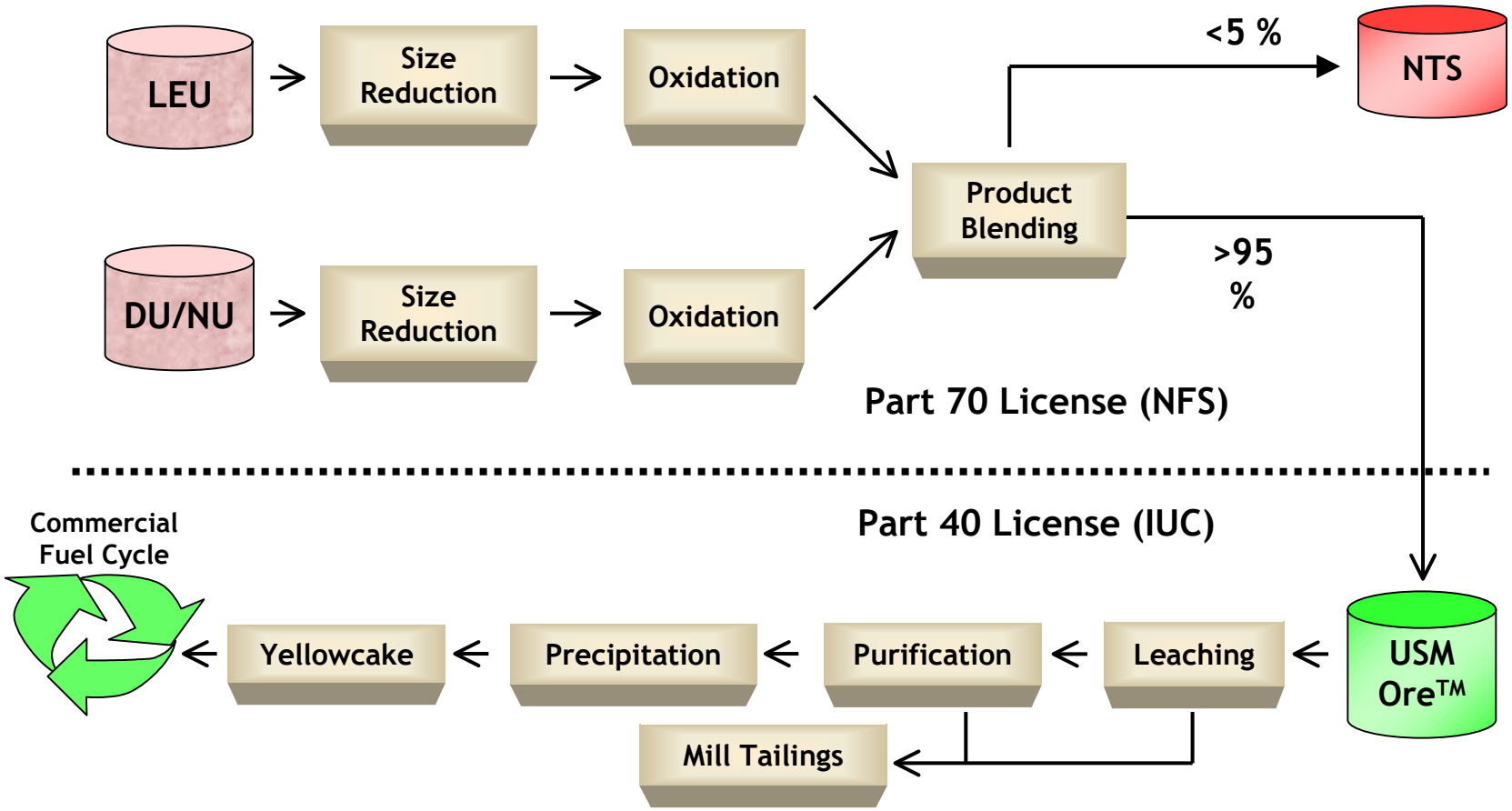

REGULATORY FRAMEWORK

- LEU received and downblended at NFS' Part 70 facility in Erwin, TN, under separate Part 70 licensing action at NFS
- USM Ore will be Source Material Ore
- USM Ore will be processed primarily for the recovery of uranium at a Part 40 licensed uranium mill
- Tailings will be 11e.(2) byproduct material
- Amendment required for Mill license to authorize USM Ore as an alternate feed material

PROCESSING USM ORE COMPLIES WITH REQUIREMENTS OF PART 40 AND APPENDIX A

- Will comply with all requirements of Part 40 and Appendix A thereto, and Alternate Feed Guidance
  - USM Ore is source material
  - Consistent with previous NEPA analyses
  - Satisfies policies underlying Alternate Feed Guidance

Environmental Report

BASES FOR ENVIRONMENTAL REPORT

- Safety, health, and environmental impacts evaluated on *incremental impacts* basis (i.e., impacts over and above currently licensed Mill activities)
- Exposures and radioactivity levels compared to recent production years (1995/1996 & 1999)
- Conservative assumptions used in all analyses

TRANSPORTATION

- Fewer potential transportation impacts
  - USM Ore is high grade
  - Significantly smaller quantity of ore

	Fully Licensed Capacity	Historic Peak Production	USM Ore Program
Ore	109 trucks/day	65 trucks/day	Less than 1 truck/day
Reagents & Other	>8 trucks/day	18 trucks/day	1 truck/week
Yellowcake	8,760,000 lbs/yr (1 truck/day)	5,000,000 lbs/yr (1 truck/2 days)	4,000,000 lbs (1 truck/3 days)

GROUNDWATER

- No impacts to groundwater
  - Tailings cells are not leaking

- Hypothetical accident involving tailings cell leak to perched zone evaluated.
  - Fate and transport analysis to Ruin Spring
  - Analyzed potential impacts on humans
  - Analyzed potential impacts on biota

GROUNDWATER (cont'd)

- Only radionuclide that reached Ruin Spring in 10,000 years was Tc-99
  - All other radionuclides either retarded by geochemical reactions or half lives that resulted in total radioactive decay
- Any such hypothetical impacts on humans would be below the regulatory standard (25 mrem/yr)
  - No potential significant impacts on humans
- Any such hypothetical impacts on biota would be be less than 0.01 of the benchmark (1 mGy/d (DOE 2002))
  - No potential significant impacts on biota

SURFACE WATER

- No impact of current Mill operations on surface water
- No new pathways
- No potential incremental impact of USM Ore Program on surface water

AIR QUALITY (NON-RADIOLOGICAL)

- No exposed ore on ore pad
- Conclusion – fewer potential impacts than previously licensed mill activities

OCCUPATIONAL HEALTH

- Five Categories:
  - Airborne particulate
  - Radon
  - Gamma
  - TEDE
  - Non-rad contaminants

- Exposures well below regulatory standards and ALARA goals

POTENTIAL DOSE TO INDIVIDUALS

- The potential dose to individuals will be less under the USM Ore Program

MILDOS AREA Dose Calculations Standard – 25 mrem/yr; Regional Background – 400 mrem/yr (Annual Dose Commitments, mrem/yr)			
Receptor Location	**Full Mill Capacity**	**Reference Contaminant Case (4 million lb/yr)**	**Maximum Contaminant Case (4 million lb/yr)**
Current Nearest Resident (near BHV-1, 1.2 mi N of Mill)	**9.74**	**4.48**	**5.95**
Blanding (6 mi NNE of Mill)	**0.604**	**0.22**	**0.30**
White Mesa Community (5 mi SE of Mill)	**1.0**	**0.35**	**0.47**

POTENTIAL DOSE TO POPULATIONS

- The potential dose to populations will be significantly less under the USM Ore Program

	Population within 50 miles	Annual Population Dose Commitment (man-rem/yr)	Annual Dose from Natural Background (man-rem/yr)
Conventionally Mined Ore	24,500	4.04	9,800
USM Ore Reference Contaminant Case	24,500	0.35	9,800
USM Ore Maximum Contaminant Case	24,500	0.46	9,800

WASTE MANAGEMENT

- Smaller Volume of Tailings

Yellowcake Produced (lbs)	Tailings from Conventionally Mined Ores (tons)	Tailings from USM Ore (tons)
28 Million	3.8 Million	Less Than 61,000

- No Radon
- Fewer Potential Impacts Under USM Ore Program

ENVIRONMENTAL REPORT CONCLUSIONS

The USM Ore Program will result in *no* potential significant incremental impacts and in most cases *fewer* potential impacts than previously licensed activities

FINAL REMARKS - BENEFITS OF USM ORE PROGRAM

- Recovers valuable energy resource through *recycling* for future U.S. electrical power needs
- Supports San Juan County & Native American Workforce
- No potential, significant, incremental public health, safety or environmental impacts

PATH FORWARD FOR USM ORE PROGRAM

- NFS Proposal under review by DOE
- IUC License Amendment
  - White Paper to be Submitted to NRC for Consideration of Policy Issues
  - Submittal of License Amendment Application Upon Receipt of Decision on Policy Issues
- Yellowcake production anticipated in 2006